

**REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Applicant would like to thank Examiner Rayyan for the courtesies she extended Applicant's representative during the December 19, 2006 telephonic interview. The substance of that interview is embodied in the following remarks.

As a preliminary matter, Applicant notes the Office Action's acknowledgement of receipt of papers submitted under 35 U.S.C. § 119(a)-(d) and approval of the drawings and consideration of the Information Disclosure Statement filed concurrently on January 23, 2004. Regarding non-patent literature A14-A15 which is not in the English language, Applicant respectfully submits that a concise explanation of the relevance for non-patent literature A14 and A15 is provided on pages 2 and 3 of the present specification. For the Examiner's convenience, Applicant has prepared another PTO-1449 form listing references A14 and A15 for the Examiner's consideration. Applicant respectfully requests the Examiner to return an initialed and signed copy of the form in the next communication.

Claims 1-22 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Patent Abstract of Japan, Publication No. 2000-066884 (Application No. 10-234704) to Shozo.

By this amendment, the specification has been amended to correct a minor informality. Claims 1-22 remain unchanged in the application. This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. Claims 1-22 remain pending in this application for consideration.

Applicant respectfully submits that each of the independent claims is patentably distinguishable over the cited reference as required by § 102. Applicant further submits that the cited reference fails to disclose Applicant's claimed flow data generation method having

*relation types between the first term data and the second term data and position data . . . on position where each value of the first term data and second term exists* as recited in independent claims 1 and 4. Independent claims 10, 13, 19 and 20 recite similar features in the context of apparatus claims and claims 21 and 22 recite similar features in the context of program product claims. By contrast, the cited reference fails to teach or suggest these claimed features. Accordingly, independent claims 1, 4, 10, 13 and 19-22 and claims dependent therefrom are patentably distinguishable over the cited reference. This distinction will be further described below.

**THE CLAIMS ARE DIRECTED TO STATUTORY SUBJECT MATTER**

Claims 1-22 were rejected under 35 U.S.C. § 101 for being directed to non-statutory subject matter. Specifically, the Examiner rejected claims 1-22 because “they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application.”

After reviewing, the section of the MPEP cited by the Examiner, the relevant case law, and the language of the independent claims, Applicant respectfully disagrees with the Examiner that the claimed invention does not provide a tangible result. Each of the independent claims is addressed below:

Claim 1 recites:

A flow data generation method comprising: . . . “*repeating the (e) searching, (f) associating, and (g) adding to generate a partial tree including a root identical to the second term data of the first binomial relation data.*”

Independent claims 10 and 19 each recites a similar feature in the context of apparatus claims and independent claim 21 recites a similar feature in the context of a program product claim.

Claim 4 recites:

A flow data generation method comprising: . . . “repeating the (e) searching, (f) associating, and (g) adding to generate a first partial tree including a first root identical to the second term data of the first binomial relation data;” “(i) generating a first data tree including . . .;” “repeating the (e) searching, (f) associating, and (g) adding to generate a second partial tree . . .;”;“(i’) generating a second data tree . . .”

Independent claims 13 and 21 each recites similar features in the context of apparatus claims and independent claim 22 recites similar features in the context of a program product claim.

Applicant asserts that the claimed flow data generation methods of claims 1 and 4 claim more than the steps of storing, associating, searching, etc., but as indicated above, results in a process that is a practical application because the methods, as claimed, produce a useful, concrete and tangible result; i.e., the methods recite a step or act of producing something that is useful, concrete and tangible. *See AT&T Corp. v. Excel Communs., Inc.*, 172 F.3d 1352, 1358 (Fed. Cir. 1999), *stating* (“Because the claimed process applies the Boolean principle to produce a useful, concrete, tangible result without pre-empting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101.”).

As discussed during the telephonic interview, claims 1 and 4 each at least recites the step of *repeating the (e) searching, (f) associating, and (g) adding to generate a first partial tree* which produces a useful, concrete and tangible result. Thus, the claims are directed to statutory subject matter under 35 U.S.C. § 101. In addition, independent claims 10, 13, 19 and 21 (directed to “flow data generation apparatuses”) and independent claims 20 and 21 (directed to “program products”) are also patentable because such apparatuses and products, as claimed, are statutory subject matter under 35 U.S.C. § 101.

Accordingly, Applicant respectfully requests reconsideration and that the rejection of claims 1-22 be withdrawn.

**THE CLAIMS DISTINGUISH OVER THE CITED REFERENCE**

The claims 1-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Shozo. In response, Applicant traverses these rejections and respectfully submits that the claims are allowable at least for the reasons that follow.

Applicant relies on MPEP § 2131, entitled “Anticipation – Application of 35 U.S.C. 102(a), (b), and (c),” which states that a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” It is respectfully submitted that Shozo fails to describe each and every element of independent claims 1, 4, 10, 13 and 19-22.

The present invention is directed to a flow data generation method, apparatus, and program product for creating a flow chart. Independent claim 1 recites a flow data generation method comprising the steps of storing a set of binomial relation data; extracting first binomial relation data to be a starting point of the flow data from the set of binomial relation data; and associating a starting point as a first parent node with a second term of the first binomial relation data as a first child node.

The method further includes the steps of adding a relation type of the first binomial relation data to an arc of the first binomial relation data; searching the set of binomial relation data for third binomial relation data referring to the position data; associating the first term data of the third binomial relation data as a second parent node; adding a relation type of the third binomial relation data to an arc of the third binomial relation data; and repeating the searching, associating and adding steps to generate a partial tree including a root identical to the second term data of the first binomial relation data. According to one embodiment of the present invention as recited in independent claim 1, the flow data generation method requires *relation types between the first term data and the second term data and position data . . . on position where each value of the first term data and second term exists*. Shozo fails to disclose these claimed features.

Shozo relates to a flowchart preparation system and record medium storage program. According to Shozo, a flowchart is prepared automatically within a range of defined items by defining the determined items among prescribed items required for designing a job. The Office Action highlights paragraph 10 of Shozo for disclosing the steps of generating the flowchart based on defined data. According to Shozo, the location data which arranges the flowchart symbols such as an object of processing are created automatically. The location data is created so that each flowchart symbol maintains suitable spacing and based on the location data, the flowchart symbol is actually plotted.

Applicant respectfully submits that the claims are not anticipated by the Shozo reference. With respect to independent claim 1, Applicant respectfully submits that the subject matter claimed therein patentably distinguishes over the cited reference. Specifically, independent claim 1 requires *relation types between the first term data and the second term data and position data . . . on position where each value of the first term data and second term exists*. The Office Action equates the “defined relation” of Shozo to the claimed *relation types* and the “location data” of Shozo to the claimed *position data*. Applicant respectfully disagrees.

As discussed during the telephonic interview, the “relation types” is data indicating the type of relation between *the first term* and *the second term* as shown in the Relation Type column of FIG. 2 of the present application. Thus, the relation information not only identifies arc types, but also identifies how many arc types exist between two nodes. Graphs are generated by searching links for each node on the basis of the binomial relation information. Even in the case where two nodes are identical, an association is searched for each arc type.

In contrast, Shozo recites, “definition information which defines relation with the object of the processing expressed with the flowchart, and processing.” That is, symbols on the flowchart and processing performed are associated. The “relation” of Shozo merely represents the relation between processing and the object of the processing. For the node arrangement as to the flowchart generated by Shozo, the position coordination specified by the matrix arrangement file is arranged by step (S50) of the flowchart shown in FIG. 2. After that, at step (S70), information on relation (“flowline connection rank” of FIG. 5D) is

utilized. That is, Shozo does not utilize the relation in node arrangement (determining position coordination on the figure). In Shozo, nodes are first arranged based on information set by the user; then, the nodes are connected by lines (arc generation). Thus, Shozo fails to disclose this claimed feature.

Shozo further fails to disclose the claimed *position data*. As defined in the claim, the position data is data about the position where each value of the first term data and second term data exists in the set of binomial relation data. The position data indicates position of each element of the device in which the set of binomial relation data is stored as shown in FIG. 2, and does not indicate arrangements on the flow chart.

In contrast, the “*location data*” of Shozo indicates arrangements on the flowchart. Shozo defines “[a] location data origination means to determine the location data of the graphic symbol....” Thus, the *position data* of the present invention and the “*location data*” of Shozo are substantially different. Thus, Shozo also fails to disclose this claimed feature.

In view of the fact that the Shozo reference does not disclose each of the claimed features described above, this reference cannot be said to anticipate nor can it be said to render obvious the invention which is the subject matter of independent claim 1. Thus, independent claim 1 is allowable. Independent claims 10 and 19 each recites similar features in the context of apparatus claims and independent claim 21 recites similar features in the context of a program product claim. Thus, for substantially the same reasons stated above, independent claims 10, 19 and 21 are also allowable.

Independent claim 4 is substantially similar in scope to independent claim 1 and recites the same patentable features as independent claim 1. Independent claim 4 further includes steps for generating a second partial tree including a root identical to the second term data of the first binomial relation data. Independent claims 13 and 21 each recites similar features as independent claim 4 in the context of apparatus claims and independent claim 22 recites similar features in the context of a program product claim. Thus, for substantially the same reasons stated above with respect to independent claim 1, independent claims 4, 13, 21 and 22 are also allowable.

Since independent claims 1, 4, 10, 13 and 19-22 are allowable, claims dependent therefrom, namely claims 2-3, 5-9, 11, 12 and 14-18 are also allowable by virtue of their direct or indirect dependence from allowable independent claims 1, 4, 10, 13 and 19-22 and for containing other patentable features. Further remarks regarding the asserted relationship between any of the claims and the cited reference are not necessary in view of their allowability. Applicant's silence as to the Office Action's comments is not indicative of being in acquiescence to the stated grounds of rejection.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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